

DEFINITION

1. **Hypothyroidism** is the term given to the syndrome which results from a deficiency of circulating thyroid hormone (thyroxine).

CLINICAL MANIFESTATIONS

2. In **infancy and childhood** hypothyroidism leads to retarded growth and impaired mental development.
3. In **adults** there is tiredness, lethargy, weight gain, constipation, and intolerance to cold. The voice is husky, the skin dry and cold, and there may be a slow heart rate. In some instances there is a swelling of the thyroid gland (goitre). Mental symptoms include lack of alertness, poor memory and depression. Psychosis may occur. Investigation is likely to show a reduction in the level of serum thyroxine.

AETIOLOGY

4. In most cases hypothyroidism results from **an intrinsic disorder of the thyroid gland**, which may arise in a variety of ways.
 - 4.1. Endemic goitre and cretinism. This occurs as a direct result of living in areas of environmental iodine deficiency. It is very common in certain parts of the world where this applies, such as the Andes, Himalayas and Central Africa. Cretinism develops in the offspring of mothers living in severe endemic goitre areas.
 - 4.2. Lymphocytic thyroiditis. In areas of the world where iodine intake is adequate, this is the commonest cause of hypothyroidism. It is held to be a form of **autoimmune disease**.

The body's immune system provides an essential barrier to a large range of pathogenic organisms. **Autoimmune disease** occurs if the immune network response becomes directed at the body itself rather than at foreign antigens, and thereby causes damage to the body's tissues.

Most work on autoimmune disease and its mechanisms has been done in animals. Despite recent advances in the molecular biology of the immune response, the precise aetiology of autoimmune disease remains unknown. In humans genetic factors are thought to play a part. This is supported by studies on familial aggregation of the conditions, and high concordance in monozygotic twins. However concordance is not complete and therefore genetic factors alone are insufficient for disease to develop.

Environmental factors which have been postulated as producing disease in predisposed individuals include infection (viral and bacterial), drugs and toxins. However positive identification of specific factors in the individual conditions and cases is very rare.

Individuals with one autoimmune disease appear to be at increased risk of other autoimmune conditions. These further conditions do not arise as a consequence of the first, rather the common factor is the genetic predisposition.

- 4.3. Lymphocytic thyroiditis is more common in women than men, and occurs particularly in the age group between 30 and 50 years. There is often a family history of autoimmune thyroid disease in the patient or relatives. No specific external triggers have been identified. The two major variants of lymphocytic thyroiditis are distinguished most easily by the presence or absence of goitre:
 - 4.3.1. Atrophic thyroiditis, also known as primary myxoedema. Non-goitrous.
 - 4.3.2. Hashimoto's disease. Usually associated with a goitre.
- 4.4. Reidel's thyroiditis. A much rarer cause of hypothyroidism. This occurs mainly in women, and the cause is unknown.
- 4.5. Dysmorphogenesis. A group of rare inherited disorders of thyroid hormone synthesis. Goitre is present, sometimes from birth.
- 4.6. Previous treatment of hyperthyroidism by surgery or radioiodine.
- 4.7. Excess iodine intake.
- 4.8. Drugs. Lithium and amiodarone are known to cause hypothyroidism.
5. **Secondary hypothyroidism.** This is much less common than hypothyroidism due to thyroid disease. The condition results from disorders of the pituitary gland such as Sheehan's syndrome (post partum pituitary necrosis) or pituitary tumour.

CONCLUSION

6. **Hypothyroidism** is a condition which results from deficiency of circulating thyroid hormone. In some cases there is a swelling of the thyroid gland (goitre). There are various causes which have been listed above. In this country, **autoimmune thyroiditis** is the commonest cause.

REFERENCES

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